

February/FY06

**JOINT READINESS TRAINING
CENTER and FORT POLK
Louisiana**

**Army Defense Environmental
Restoration Program
Installation Action Plan**

FINAL 30 MARCH 2006

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The purpose of the Installation Action Plan (IAP) is to outline the total multi-year Installation Restoration Program for an installation. The plan identifies environmental cleanup requirements at each site or area of concern, and proposes a comprehensive, installation-wide approach, with associated costs and schedules, to conduct investigations and necessary remedial actions.

In an effort to coordinate planning information between the restoration manager, US Army Environmental Center (USAEC), Joint Readiness Training Center (JRTC) and Fort Polk, IMA, executing agencies, an IAP was completed. The IAP is used to track requirements, schedules and tentative budgets for all major Army installation cleanup programs.

All site-specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

The following agencies contributed to the formulation and completion of this Installation Action Plan during a planning workshop held on 8 February 2006:

Company/Installation/Branch

DPW, Fort Polk

Engineering & Environment Inc, for USAEC

IMA-SWRO

URS - Fort Polk

USAEC (conference call)

USACE – Tulsa District

Acronyms & Abbreviations

~	approximately
AEC	Army Environmental Center
AEDB-R	Army Environmental Data Base - Restoration
AOC	Area of Concern
ASP	Ammunition Supply Point
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CMB	Compliance Management Branch
CMS	Corrective Measure Study
CTC	Cost-to-Complete
DD	Decision Document
DEH	Directorate of Engineering and Housing
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DMM	Discarded Military Munitions
DOL	Directorate of Logistics
ENRMD	Environmental and Natural Resources Management Division
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency (United States)
ER,A	Environmental Restoration, Army (Formerly DERA)
FORSCOM	US Army Forces Command
FS	Feasibility Study
FUDS	Formerly Used Defense Sites
FY	Fiscal Year
GWM	Groundwater Monitoring
IAP	Installation Action Plan
IMA	Installation Management Agency
IRA	Interim Remedial Action
IRP	Installation Restoration Program
IUA	Intensive Use Area
JRTC	Joint Readiness Training Center
LA	Louisiana
LDEQ	Louisiana Department of Environmental Quality
LTM	Long-Term Management
LUA	Limited Use Area
MACOM	Major Army Command
MMRP	Military Munitions Range Program
MO-(1-3)	Management Option (1-3)
MOGAS	Motor Gasoline
NE	Not Evaluated
NPL	National Priorities List
OB/OD	Open Burn/Open Detonation
OE	Ordnance or Explosives
PA	Preliminary Assessment
PBC	Performance Based Contract
PCB	Polychlorinated Biphenyls
POL	Petroleum, Oil and Lubricants

Acronyms & Abbreviations

ppb	parts per billion
RA	Remedial Action
RAC	Risk Assessment Code
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operation)
RAB	Restoration Advisory Board
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RECAP	Risk Evaluation/Corrective Action Program
REM	Removal
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RIP	Remedy in Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
SAP	Satellite Accumulation Point
SI	Site Inspection or Site Investigation
SUPA	Special Use Permit Authorization
SWMU	Solid Waste Management Unit
TPH	Total Petroleum Hydrocarbons
TRADOC	Training and Doctrine Command
TRC	Technical Review Committee
USACE	United States Army Corps of Engineers
USAEHA	United States Army Environmental Hygiene Agency
USAF	United States Air Force
USATHAMA	US Army Toxic and Hazardous Material Agency (replaced by USAEC)
USFS	United States Forest Service
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VOC	Volatile Organic Compounds

Installation Locale: Fort Polk is located in Vernon Parrish, six miles southeast of Leesville, Louisiana and occupies 198,759 acres. Fort Polk is divided into two cantonment areas and several large training ranges. The larger and more extensively developed cantonment area is known as South Fort Polk and a smaller, less developed cantonment area, located directly north of South Fort Polk, is known as North Fort Polk. A third cantonment area is located on the east side of Peason Ridge which is approximately 20 miles north of the main post.

Training ranges are located in the remainder of Fort Polk's main post and at Peason Ridge. The US Forest Service administratively controls 98,125 acres on the main post and 480 acres at Peason Ridge. These lands are used by the Army under the conditions of a Special Use Permit Authorization. Access between the main post and Peason Ridge is via a tank trail over land leased from the State of Louisiana, Vernon Parish and private landowners and companies. Total current maneuver acreage on the main post and Peason Ridge is 139,171 acres.

Installation Mission: Fort Polk has continued to undergo transitions, as it has become one of four Army Combat Training Centers when it became the home of the Joint Readiness Training Center (JRTC). This change was the result of recommendations under the Defense Base Realignment and Closure Act of 1990, Public Law 101-510, realigning the JRTC from Fort Chaffee, Arkansas and the 199th Separate Motorized Brigade from Fort Lewis, Washington to Fort Polk. The JRTC was relocated to Fort Polk on March 12, 1993, with the mission of providing advanced level training for the Army and Air Force contingency forces under tough, simulated conditions which replicate, as closely as possible the operational environment the unit to which the unit may deploy. The major training effort of the JRTC is focused on Army light forces, e.g., airborne, air assault, ranger, and light infantry battalions, special operation forces and their associated combat support and combat service support units. Before moving to Fort Polk, the 199th was re-flagged as the historic 2nd Armored Cavalry Regiment.

The 4th Brigade, 10th Mountain Division, one of the Army's new modular brigades, officially activated January 19, 2005 at Fort Polk. The Army is restructuring from a division-based to a brigade-based force, consisting of self-sufficient, brigade-based modules that will greatly improve strategic responsiveness. Fort Polk is also home to Warrior Brigade which contains several combat support units. Medical, dental and military police commands also support the installation.

Currently, Fort Polk is supporting the war on terrorism by providing mission-specific training for the Army's light infantry and special operations forces and by deploying home station and reserve component forces in support of Operations Enduring Freedom, Noble Eagle, and Iraqi Freedom.

Lead Organization:

Installation Management Agency, Southwest Regional Office

Regulatory Participation:

Louisiana Department of Environmental Quality (LDEQ), Baton Rouge, LA

NPL Status: Non-NPL

RAB/TRC/TAPP Status: Fort Polk does not currently have a Restoration Advisory Board (RAB) or a Technical Review Committee (TRC). Surveys were conducted in the summer of 1996 and February 1998. There was not sufficient community interest to justify forming a RAB.

Program Summaries:

IRP

Contaminants of Concern: Organics, Nitro aromatics, Metals, Solvents, Pesticides

Media of Concern: Groundwater, Surface Water, Sediment

Estimated date for RIP/RC: 2003/2007

Funding to Date (thru FY05): \$24,495K

Current Year Funding (FY06): \$325K

Cost-to-Complete (FY07+): \$6,431K

MMRP

Contaminants of Concern: UXO

Media of Concern: Groundwater, Soil

Estimated date for RIP/RC: 2022

Funding to Date (thru FY05): \$ 25K

Current Year Funding (FY06): \$459K

Cost-to-Complete (FY07+): \$28,412K

Cleanup Program Summary

Historic Activity: Camp Polk was established in 1941 as an Armored Division Training Center as a result of the Louisiana Maneuvers. It was named in honor of the Right Reverend Leonidas Polk, the first Episcopal Bishop of Louisiana, also known as “The Fighting Bishop,” who was killed while fighting for the Confederacy in 1864. The camp was originally planned as a sister post to three Louisiana Army Installations, Camps Claiborne, Livingston and Beauregard.

During World War II, Camp Polk was the preparation site for 800,000 soldiers aiding in the invasion of North Africa and Europe. Units receiving training included the 3rd, 5th, 7th, 8th, 9th, and 11th Armored Divisions, the 95th Infantry Division and the 11th Airborne Division. On March 31, 1947, Camp Polk was deactivated and put on standby status. Limited reactivation occurred when Louisiana and Arkansas National Guard units trained at Camp Polk, during the summers of 1948 and 1949.

Activity at Camp Polk increased by August 9, 1950, with the onset of the Korean Conflict, and included complete post renovation. Units stationed at the camp between 1950 and 1954 included the 45th Infantry Division – Oklahoma National Guard, XV Corps, the 37th Infantry Division – National Guard, and the 1st Armored Division. Camp Polk was again closed in 1954, but only until the summer of 1955. Operation Sage Brush, a combined Army and US Air Force (USAF) maneuver reopened the camp. Later, in November 1955, Camp Polk was made a permanent installation and renamed Fort Polk with the 1st Armored Division based there.

Between June 1959 and August 1960, Fort Polk was again deactivated. The Berlin Crisis later established a need for reopening Fort Polk, which became the base for the 49th Armored Division – Texas National Guard. As the number of inductees increased during the early 1960s, an Infantry Training Center was established at Fort Polk. This center continued to operate through the Cuban Missile Crisis, and, in December 1965, Fort Polk began to conduct Vietnam-oriented advanced training. On October 23, 1968, Fort Polk was renamed a permanent installation.

When Army reorganization occurred in January 1973, Fort Polk became the US Army Infantry Training Center under the US Army Training and Doctrine Command (TRADOC), effective July 1973. For the first time in its history, Fort Polk was the prime installation in a specified combat arms branch. Further restructuring in 1975, along with the activation on post of the 5th Infantry Division (Mechanized), transferred Fort Polk from TRADOC to FORSCOM. Since the mid-1970s, development has continued on Fort Polk through extensive building programs.

The area occupied by Fort Polk has been used continuously, with the exception of periods of time in 1947, 1954, 1955, 1959, 1960, for training various Army and National Guard units. Contamination assessments and corrective actions have been ongoing since 1983 when USATHAMA first conducted a site assessment. Subsequent RFIs and corrective actions have been completed at the South Fort and North Fort Cantonment areas. The LDEQ have provided regulatory oversight for all site assessments and corrective actions.

Cleanup Program Summary

IRP

- Prior Year Progress: Began LTM phase – cover system monthly inspections, grass mowing, erosion repair, semi-annual groundwater sampling, etc. at POLK-08. Continued seep sampling at POLK-11.
- Future Plan of Action: Continue LTM at POLK-08. Complete seep sampling and prepare for closure in FY06 for POLK-11.

MMRP

- Prior Year Progress: Preliminary Assessment has been completed at all sites. An SI will be conducted at three of the sites in FY06.
- Future Plan of Action: An RI/FS is scheduled to begin for all sites in 2011.

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Installation Restoration Program

AEDB-R Sites/Sites RC: 22/20

AEDB-R Site Types:

5 Landfills	3 Spill Sites
3 Surface Impoundments/Lagoons	2 Waste Treatment Plants
2 Explosive Ordnance Disposal (EOD) Areas	2 Fire Training Areas
1 Contaminated Building	1 Contaminated Fill
1 Above Ground Storage Tank	2 Storage Areas

Contaminants of Concern: Organics, Nitro aromatics, Metals, Solvents, Pesticides

Media of Concern: Groundwater, Surface Water, Sediment

Completed REM/IRA/RA:

FY90 - REM: UST removals in FY 90

1994 - REM: Remedial Action of South Fort Polk Wastewater Lagoon completed in July 1994 (\$1,769,000)

1997 - IRA: Cap material and institutional controls initiated on Range 23A Chemical Agent Burial Site in October 1997 (\$200,000 - FY96)

1997 - IRA: Dewatering and backfilling at Former Burning Ground in November 1997 (\$50,000 - FY96)

1998 - IRA: Soil removal and backfill at K Ave. MOGAS Site in May 1998 (\$76,702)

1998 - IRA: Range 23A Chemical Agent Burial Site for erosion control in Sept 1998

2000 - IRA: Mill Creek Stockpile Design/Development in 2000 (\$102,500)

1999 - IRA: Erosion Control at Former Burning Ground & K Ave MOGAS Site in 1999 (\$30,000)

2001 - RA: Soil Removal at DOL Solvent Waste Storage Area in 2001 (\$270,000)

- IRA: Mill Creek Landfill, 100% of rough grading completed. (\$2,310,000)

- RA: Construction Material Disposal Area – Seep management project implemented (\$300,000)

RA: Mill Creek Landfill, engineered cover system constructed in FY04

Total IRP Funding:

Prior Years (thru FY05):	\$24,295K
Current Year (FY06):	\$ 325K
Future Requirements (FY07+):	<u>\$ 6,431K</u>
TOTAL:	\$31,251K

Duration of IRP:

Year of IRP Inception: 1983

Year of IRP Completion Excluding LTM: 2007

Year of IRP Completion Including LTM: 2029

IRP Contamination Assessment

In 1983, an Installation Assessment was conducted by US Army Toxic and Hazardous Material Agency (USATHAMA) to determine past and current use of toxic and hazardous materials as well as the potential for these substances to migrate off the installation. The assessment determined that off-post migration of contaminants via surface water or groundwater was not evident.

The US Army Environmental Hygiene Agency (USAEHA) conducted an evaluation of Solid Waste Management Units (SWMUs) in 1987 and 1989. Twenty-one SWMUs were identified on Fort Polk. A remedial investigation/feasibility study (RI/FS) was conducted at 3 sites: South Fort Polk Wastewater Lagoon, the Mill Creek Landfill, and the Former Burning Ground. No additional sampling was recommended for 11 sites, surface water, sediment, and waste samples were collected at one site and monitoring wells were installed. Groundwater, surface water, sediment, and soil samples were collected at six sites.

The results of the RI/FS were addressed in the Fort Polk Remedial Investigation Report prepared for USATHAMA by Roy F. Weston, Inc. in 1989. The Mill Creek Landfill was found to be contaminating the groundwater in the shallow aquifer with low levels of certain organics (volatile and semi-volatile), nitro aromatics, and metals, but the Endangerment Assessment concluded that no unacceptable risks were found. The Wastewater Lagoon was recommended for closure, and it was determined that all contamination was within the physical confines of the lagoon. The Former Burning Ground RI indicated that no appreciable migration of the constituents of concern had occurred beyond the fenced-in site area.

A remedial action at the Wastewater Lagoon, consisting of sludge removal and regrading, commenced in September of 1993 and was completed in July 1994. Long-term Management (LTM) was conducted through 1998.

Fort Polk applied for and received a RCRA Subpart X (Federal regulations for Miscellaneous Units) Permit in 1995 for their open burn/open detonation (OB/OD) range. In response to this permit application, a RCRA Facility Assessment (RFA) Report was prepared for the EPA by PRC Environmental Management, Inc. in 1993. The RFA report identified 57 SWMUs and 5 Areas of Concern (AOCs). Thirty-one of the SWMUs plus 2 AOCs were recommended for a RCRA Facility Investigation (RFI). In response to this, a draft scope of work for these investigations was completed in December 1993. The Corrective Action portion of the permit was issued in June 1995.

The Phase I Mill Creek Landfill RFI began in January 1995 and was completed in June 1995. Samples were collected from creek water and sediment, seeps, and groundwater. The results were compared to action levels established by the EPA. Action levels were exceeded for volatile organics, pesticides, and metals in groundwater; pesticides and metals in creek water; pesticides and metals in creek sediment; and volatile organics, pesticides, herbicides, and metals in seeps.

IRP Contamination Assessment

Phase II of the Mill Creek Landfill RFI began in March 1996 and was completed in October 1997. Samples were collected from creek water and sediment, seeps, groundwater, and soil borings. The results were compared to action levels established by the Louisiana Department of Environmental Quality (LDEQ). Action levels were exceeded for explosives and metals in soil; pesticides, herbicides, metals, and explosives in groundwater; pesticides in creek water; metals in creek sediment; and pesticides and metals in seeps.

A Corrective Measures Study (CMS) and Baseline Human Health and Ecological Risk Assessment was completed for the Mill Creek Landfill and submitted to the LDEQ in 1999. Based on the results of these reports, a clay cap was designed as a corrective action for part of the Mill Creek area. The final design was submitted to the LDEQ in 2000. The Phase I RFI for the Installation-Wide SWMUs (all SWMUs with the exception of the Mill Creek Landfill) began in April 1995 and was completed in March 1997. The Phase II RFI for the Installation-Wide SWMUs began in October 1997 and was completed in June 1999. The Installation-Wide SWMU Phase III RECAP Assessment was completed in 2001.

In 1999, POLK-24, Former Ammo Supply Point (ASP) was added to the IRP. The constituents of concern at this site are metals and potential ordnance material.

Cleanup Exit Strategy:

Long term management (LTM) will be conducted at Polk-08 for up to 30 years as required by approved closure plan with the LDEQ. At Polk-11, a passive remediation system is currently in place and will continue to operate into FY07. It is expected that RC will be achieved in FY07 and LTM will follow.

1983

- Installation Assessment of Headquarters, 5th Infantry Division (Mechanized) and Fort Polk and Peason Ridge, LA. Report No. 333, Environmental Science and Engineering, Inc., Gainesville, FL 32602

1989

- Groundwater Quality Survey No. 38-26-8809-90, Evaluation of Solid Waste Management Units, US Army 5th Infantry Division (Mechanized) and Fort Polk, US Army Environmental Hygiene Agency, Aberdeen Proving Ground, MD 21010-5422, 14-18 September 1987, 10-21 July 1989, and 21-25 August 1989
- Fort Polk Remedial Investigation Report, Contract No. DAAA15-85-D-0015, Task Order – 8, Roy F. Weston, Inc., West Chester, PA 19380, Aug-89

1993

- RCRA Facility Assessment, PRC Environmental Management, Inc., Baton Rouge, LA, Dec-93

1994

- Site Visit Report – RCRA Corrective Action Program, Radian Corporation, Baton Rouge, LA. Jan-94

1995

- Mill Creek Landfill Phase I RI, Radian Corporation, Baton Rouge, LA., Oct-95

1996

- RCRA Facility Investigation Installation-Wide SWMU, Mar-96

1997

- RFI Interim Report Installation-Wide SMWUs, Radian International LLC, Baton Rouge, LA, Jan-97
- Mill Creek Landfill Phase II RFI, Radian International LLC, Baton Rouge, LA, Oct-97

1998

- Relative Risk Ranking Site Evaluations, Radian International LLC, Baton Rouge, LA, Sep-98
- Interim Stabilization Measures Report, Former Chemical Agent Burial Ground, Former Burning Ground, Avenue K MOGAS Site, Radian International LLC, Baton Rouge, LA, Sep-98
- Corrective Measure Implementation Program Plan, Evaluation and Design of Mill Creek Landfill, Radian International LLC, Baton Rouge, LA, Sep-98
- Additional Investigation for Installation-Wide SWMUs Phase II RFI, Radian International LLC, Baton Rouge, LA, Sep-98
- Background Study for Metals, Pesticides, and Herbicides, Radian International LLC, Baton Rouge, LA, Oct-98

1998 (cont.)

- Mill Creek Landfill Secondary Site Reconnaissance Report, Radian International LLC, Baton Rouge, LA, Dec-98

1999

- RFI Report, Installation-Wide SWMUs, Radian International LLC, Baton Rouge, LA, Jan-99
- Relative Risk Ranking Site Evaluation Report, Range 1 Area, Radian International LLC, Baton Rouge, LA, Feb-99
- Mill Creek Landfill Secondary Site Reconnaissance, Radian International LLC, Baton Rouge, LA, Mar-99
- Additional Investigations Report, Installation-Wide SWMUs 25A, 26, 27A, 41A, Radian International LLC, Baton Rouge, LA, Jun-99
- Phase I Site Assessment Report, Former Ammo Supply Point, Radian International LLC, Baton Rouge, LA, Jun-99
- RRSE, Former Ammo Supply Point, Jun-99
- DOL Waste Solvent Storage Area Site Investigation, Radian International LLC, Baton Rouge, LA, Jun-99
- Relative Risk Ranking Site Evaluation Report, Block 100, Radian International LLC, Baton Rouge, LA, Jul-99
- Additional Activities for the Installation-Wide SWMUs RFI (Construction Debris Landfill), Radian International LLC, Baton Rouge, LA, Oct-99
- Activities for SWMU 26, Nov-99

2000

- Construction Debris Landfill Erosion Control Plan, Site Reconnaissance, Radian International LLC, Baton Rouge, LA, Jan-00
- RECAP Assessment, Installation-Wide SWMUs Phase III RFI, URS, Baton Rouge, LA, Feb-00
- Mill Creek Landfill Corrective Action Design, URS, Baton Rouge, LA, Jun-00
- DOL Waste Solvent Storage Area Site Remediation Definition, URS, Baton Rouge, LA, Jul-00
- Phase II SI, Former Ammo Supply Point, URS, Baton Rouge, LA, Jul-00
- RFI and RECAP Assessment, AOC 2 and AOC 3, URS, Baton Rouge, LA, Aug-00

2001

- Mill Creek Landfill Corrective Action Revised Design , URS, Baton Rouge, LA, Feb-01
- Borrow Area Study, Mill Creek Landfill, URS, Baton Rouge, LA, May-01
- Background Study for Metals in Groundwater, URS, Baton Rouge, LA, Jun-01
- Mill Creek Landfill Borrow Area Design, URS, Baton Rouge, LA, Jul-01
- Construction Debris Landfill Seep Management System Design, URS, Baton Rouge, LA, Aug-01
- Construction Debris Landfill Erosion Control Design, URS, Baton Rouge, LA, Aug-01

2004

- Groundwater Monitoring for Mill Creek Landfill, URS, Baton Rouge, LA, Jan-04
- Mill Creek Landfill Monitoring Well Installation and Groundwater Sampling Report, URS, Baton Rouge, LA, Mar-04
- Plugging and Abandonment of the Former ASP Groundwater Monitoring Wells, URS, Baton Rouge, LA, Mar-04
- Mill Creek Landfill Monitoring Well Installation Work Plan, URS, Baton Rouge, LA, Apr-04
- Corrective Measure Study, URS, Baton Rouge, LA, May-04

2005

- Mill Creek Landfill Monitoring Well Installation Report, URS, Baton Rouge, LA, Jan-05,
- Operation and Maintenance Plan, Mill Creek Landfill, Shaw, Houston, TX, Mar-05,
- Mill Creek Landfill Cover System Construction Certification Report, URS, Baton Rouge, LA, May-05,
- Mill Creek Landfill Long-Term Monitoring Program, Year 1 Report, URS, Baton Rouge, Sep-05,
- Mill Creek Landfill Inspection and Maintenance Report, URS, Baton Rouge, LA, Sep-05,
- Addendum No. 1 for Construction Certification Report for Mill Creek Landfill, URS, Baton Rouge, Nov-05
- Seep Management System Sampling Activities Report, Construction Debris Landfill September 2004 – June 2005, URS, Baton Rouge, LA, Oct-05

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Installation Restoration Program Site Descriptions

POLK-08 (EPA SWMU #17) MILL CREEK LANDFILL

SITE DESCRIPTION

POLK-08 is an abandoned landfill that encompasses ~400 acres, not all of which was used for disposal. It is located north of Mill Creek Road in the South Fort Polk Cantonment Area. This site is within an endangered species (Red-Cockaded Woodpecker) habitat. This site is also a recharge zone for a regional sole-source aquifer, which is used for drinking water. Historical information indicates the presence of explosive residues and unexploded ordnance. A large portion of the landfill is now located within the boundaries of the Ammunition Supply Point (ASP).

The landfill was operated from 1947 until 1986 and was used for the disposal of hazardous and non-hazardous wastes which included industrial, municipal, medical wastes and construction debris generated by Fort Polk.

The RI indicated that groundwater, surface water, soil, and sediment were contaminated with organics, pesticides, nitro aromatics and metals. The Phase I RFI was conducted from Jan to Jun 1995. The Phase II RFI was conducted from Mar 1996 to Oct 1997. A Human Health and Ecological Risk Assessment and Corrective Measures Study was completed and submitted to the LDEQ in 1999. The RFI results indicated solvents and pesticides above RECAP levels, soil erosion and leachate leaving the landfill area. Groundwater monitoring began in 1998. The RD (engineering site recon and construction design for a 32-acre engineered cover system) began in 1999 and was completed in FY01. The engineered cover system will eliminate the risk to human health. The Secondary Site Reconnaissance Report was finalized in Mar 1999. The exposed debris was relocated (in FY00) from several of the areas of concern and moved to the area to be capped. The landfill cap (approx. 32-acres) was completed and the existing groundwater wells were plugged and abandoned in FY04. The cap included removal of vegetation, grading, re-vegetation and placement of soil from an on-post borrow area. This site includes a total of twelve groundwater monitoring wells which were installed in FY04.

CLEANUP STRATEGY

Groundwater monitoring and cover system maintenance will continue. The potential for groundwater monitoring may continue for up to thirty years.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: High

CONTAMINANTS OF CONCERN: Organics, Nitro aromatics, Metals, Solvents, Pesticides

MEDIA OF CONCERN: Soil, Groundwater, Surface Water, Sediment

PHASES	Start	End
PA.....	198709	199005
SI.....	198709	199005
RI/FS	199501	199811
RD	199901	200006
IRA	200006	200403
RA(C)	200403	200409
LTM	200410	202909

RC: 200409

POLK-11 (EPA SWMU #21)

CONSTRUCTION MATERIAL DISPOSAL AREA

SITE DESCRIPTION

This former construction debris open dumping site, ~20 acres in size, is located less than one-half mile north of Mill Creek Road.

The RFI Phase I began in February 1995 and was completed in June 1997. Analytical results indicate groundwater and soil contamination above action levels. Phase II RFI was completed in June 1998. Due to lead contamination in seep water, a Phase II addendum was completed in June 1999. The RECAP Assessment required a MO-3 (full risk assessment) that indicated metal impacts to surface water. The RD for seep control was approved by LDEQ in late FY01. Construction of the seep controls was started in FY01 and was completed late FY02.

CLEANUP STRATEGY

Continue erosion controls and seep monitoring. A passive remediation system is currently in place and will continue in operation.

STATUS

REGULATORY DRIVER: CERCLA

RRSE: High

CONTAMINANTS: Metals

MEDIA OF CONCERN:
Surface Water

PHASES	Start	End
PA.....	198709	199005
SI.....	198709	199005
RI/FS	199502	199912
RD	200008	200109
RA(C)	200101	200211
RA(O)	200301	200709
LTM	200710	202909

RIP: 200301

RC: 200709

IRP No Further Action Sites Summary

AEDB-R#	Site Title	Documentation/Reason for NFA	NFA Date
POLK-01	HAZ WASTE CONTAINER STORAGE (BLDG 4053)	Site is still active. Not eligible for IRP	198803
POLK-02	DOL SOLVENT WASTE STORAGE AREA	Contaminated soil was removed in late FY01. Site closure documentation submitted to LDEQ in April 2003	200109
POLK-03	SOUTH FORT POLK WASTEWATER LAGOON	NFA identified in the RECAP Assessment. Site closure documentation submitted to LDEQ in April 2003	199407
POLK-04	NORTH TANK PREWASH FAC LAGOONS	Site is still active. Not eligible for IRP	199005
POLK-05	SOUTH TANK PREWASH FAC LAGOONS	Site is still active. Not eligible for IRP	199005
POLK-06	RANGE 23A CHEMICAL AGENT BURIAL SITE	All required cleanups completed. Site closure documentation submitted to LDEQ in April 2003	200109
POLK-07	BAYOU ZOURIE LANDFILL	Study completed. No cleanup required.	200109
POLK-08	MILL CREEK LANDFILL	Engineered cover system completed.	200409
POLK-09	LANDFILL-CHAFFEE ROAD	Not eligible for IRP funds because of period of operation. LDEQ granted a letter granting final closure of landfill	199005
POLK-10	SLUDGE LANDFARM	Site is still active. Not eligible for IRP	199005
POLK-12	S FORT STP	Site is still active. Not eligible for IRP	199005
POLK-13	N FORT STP	Site is still active. Not eligible for IRP	199005
POLK-16	DEMO AREA EOD	Site is still active. Not eligible for IRP	199005
POLK-17	ORIGINAL FIREFIGHTER TRAINING AREA	Study completed. No cleanup required.	200109
POLK-18	FORMER FIRE TRAINING PIT	A CMS suggesting NFA was completed in FY01. Study completed. No cleanup required	200109

IRP No Further Action Sites Summary (cont.)

AEDB-R#	Site Title	Documentation/Reason for NFA	NFA Date
POLK-19	DOL STEAM CLEAN WASHRACK DISCHARGE	Site is still active. Not eligible for IRP	199005
POLK-20	BATTERY SHOP DISCHARGE	Site is an operational motor pool. Not eligible for IRP	199005
POLK-21	FORMER BURNING GROUND	As long as cover is maintained, NFA. Closure documentation submitted to LDEQ in late FY01.	200109
POLK-22	K AVENUE MOGAS SITE	NFA approved by LDEQ	200109
POLK-23	DEH, PAINT BOOTH AND PAINT WASTE SAPS	Ecological Risk Assessment submitted to LDEQ in FY03. NFA expected.	199902
POLK-24	FORMER AMMO SUPPLY POINT	Study completed. No cleanup required.	200309

Initiation of IRP: 1987***Past Phase Completion Milestones*****1987**

PA/SI Initiation (POLK-01 to -21), September
RI/FS Initiation (POLK-03), September

1988

PA/SI Completion (POLK-01 and -21), March
Response Complete - Not ER,A Eligible (POLK-01), March

1989

PA/SI Initiation (POLK-22), September

1990

PA/SI Completion (POLK-22), February
PA/SI Completion (POLK-03), March
PA/SI Completion (POLK-02, -04 to -13, -17, -19 and -20), May
Response Complete - Not ER,A Eligible (POLK-04, -05, -09, -10, -12, -13, -16, -19, -20), May

1991

RD Initiation (POLK-03), May

1992

RD Completion (POLK-03), March

1994

RA Initiation (POLK-03), January
RA Completion (POLK-03), July
LTM Initiation (POLK-03), July
PA/SI Completion (POLK-18), July
PA/SI Initiation (POLK-23), August
PA/SI Completion (POLK-23), September
RI/FS Initiation (POLK-08), October
RI/FS Initiation (POLK-21), December

1995

RI/FS Initiation (POLK-06, -07, -11), February
RI/FS Initiation (POLK-02, -17, -18, -22), March

1997

IRA Initiation (POLK-06), October
IRA Completion (POLK-06), October
IRA Initiation (POLK-21), November
IRA Completion (POLK-21), November

1998

IRA Initiation (POLK-22), May
IRA Completed (POLK-22), May
RI/FS Completed (POLK-07, 17, 18, 22, 23), June
LTM Complete (POLK-03), August

1998

IRA Initiation (POLK-06), January
IRA Initiation (POLK-22), May
IRA Complete (POLK-22), June
RI/FS Completed (POLK-02, 06, 08, 11, 18, 21), September
IRA Completed (POLK-06), September

1999

IRA Initiation (POLK-22), January
RD Initiation (POLK-02), April
RI/FS Complete (POLK-02), June
PA/SI Phase I Completed (POLK-24), June
RI/FS Initiation (POLK-024), July
RI/FS Initiation (POLK-02), October
PA/SI Initiation (POLK-24), October
RD Initiation (POLK-08), October
RI/FS Initiation (POLK-06, 07, 18), October

2000

RI/FS RECAP Assessment Completed (POLK-06), February
IRA Initiation (POLK-08), April
RD Completed (POLK-08), June
RI/FS Completed (POLK-24), July
RI/FS RECAP MO-3 Initiation (POLK-24), July
RI/FS CMS/BHHERA Completed (POLK-08), September

2001

RD SWMU 17 Mill Creek Landfill Design, February
Draft No Further Action Documentation for SWMUs 7, 25, 28, 29, 35, 37, 44, 45, 46, 50 and AOC 3 submitted to the LDEQ, July - October
Completed Interim Stabilization Measures at SWMU 43 (DOL Solvent Storage Area), September
Received LDEQ approval of Final Design for Construction Debris Landfill Seep Management System, September

2001 (cont.)

Began implementation of Interim Stabilization Measures at SWMU 21 (Construction Debris Landfill), September

Final AOC 2 - Former Avenue K MOGAS Site Management Option 3 Work Plan submitted to LDEQ, September

RD Initiation - Erosion Control (POLK-11), November

2002

Submitted the Environmental Indicator Forms CA725 and CA750 to LDEQ. February LTM completed at POLK-06, 21, 22, March

Draft Final AOC 2 - Former Avenue K MOGAS Site Management Option 3 RECAP Assessment Report Approved by LDEQ, September

Final Management Option 3 RECAP Assessment, Active Installation-Wide SWMUs, Phase III RFI Report submitted to Fort Polk and USACE and LDEQ, December

2003

Began work on the foundation layer at Polk-08

Plugged and abandoned 14 monitoring wells at Polk-24; 22 wells at Polk-08, and a total of 24 wells at Polk-02, 03, 06, 07, 11, 21, and 22.

Installed 5 monitoring wells at Polk-08

2004

Completed engineered cover system at Polk-08, September

Installed 7 monitoring wells at Polk-08, October

2005

Began LTM at Polk-08.

Construction Completion: 2004

Estimated Completion Date of IRP (including LTM phase): 2029

Fort Polk IRP Schedule

(Based on current funding constraints)

AEDB-R#	PHASE	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
POLK-08	LTM									202909
POLK-11	RAO									
	LTM									202909

Prior Years Funding

FY94 - FY04: \$24,070K

Year/Site Information	Expenditures	FY Total
FY05 POLK-08, LTM	\$291K	
POLK-11, RAO	\$134K	\$425K
Total Funding up to FY05: \$24,495K		

Current Year Funding

Year/Site Information	Expenditures	FY Total
FY06 POLK-08 LTM	\$305K	
POLK-11 RA(O)	\$ 20K	\$325K
Total Funding FY06: \$325K		

Total Future Requirements: \$6,431K

Total IRP Program Costs: \$31,251K

JRTC and FORT POLK

Military Munitions Response Program

AEDB-R MMRP Sites/Sites RC: 9/2

AEDB-R Site Types:

9 Small Arms Ranges

Contaminants of Concern: UXO

Media of Concern: Groundwater, Soil

Completed REM/IRA/RA: None

Total MMRP Funding:

Prior Years (thru FY05):	\$ 25K
Current Year (FY06):	\$ 459K
Future Requirements (FY07+):	<u>\$28,412K</u>
Total:	\$28,896K

Duration of MMRP:

Year of MMRP Inception: 2003

Year of RA Completion: 2022

Year of MMRP Completion: 2052

MMRP Contamination Assessment

MMRP Contamination Assessment Overview:

Nine MMRP sites have been identified at Fort Polk. Two sites (POLK-006-R-01 and POLK-008-R-01) were later determined not to be eligible for the MMRP. All of the sites are scheduled for a SI in FY06.

Cleanup Exit Strategy: OE site characterization and removal assessment followed by OE removal action with institutional controls.

2002

- Final US Army Closed, Transferring and Transferred Range/Site Inventory for Fort Polk and Peason Ridge, Louisiana, engineering-environmental Management, Inc., November

JRTC and FORT POLK

Military Munitions Response Program Site Descriptions

POLK-001-R-01

CASTOR 5 TRAINING AREA

SITE DESCRIPTION

This 908.47-acre former military range was a block training area located in the northwest corner of Fort Polk as observed on the Fort Polk Military Installation Map, 1979. The area is contained within the original installation boundaries and historically served as a bivouac and maneuver training area, as indicated on the Fort Polk Training Facilities Vicinity Map dated 1966. According to range control personnel, the use of munitions and ordnance on block training areas has been limited to small arms blank ammunition and pyrotechnics. The Castor 5 Training Area is a closed range currently occupied by the Maple Terrace military housing area and undeveloped lands west of the housing area and east of the current Castor 1 block training area. Though no documented evidence of UXO clearance in the area was obtained during the site visit, it is assumed that no UXO is located on the soil surface. The assumption is based on the fact that residences now occupy the former range area, site excavation and grading has occurred, and explosive ordnance disposal (EOD) personnel have no recollection of UXO findings in the area. Dates of use are estimated to be from 1941 to 1980 based on available data.

CLEANUP STRATEGY

It is anticipated the following actions will be performed:

- Site inspection, groundwater sampling
- OE site characterization and removal assessment (91 acres)
- OE removal action with institutional controls (318 acres)

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: Low Risk

CONTAMINANTS OF CONCERN:
UXO

MEDIA OF CONCERN: Soil,
Groundwater

PHASES	Start	End
PA.....	200206	200305
SI	200601	200712
RI/FS	201110	201209
RD	201510	201609
RA(C).....	201610	201709

RC: 201709

POLK-002-R-01

BIVOUAC AND MANEUVER AREA

SITE DESCRIPTION

This 1,502.41-acre closed military range consists of properties located in the northwest corner of Fort Polk as indicated on the Fort Polk Training Map, 1966. The range is bounded by the operational ranges Castor 1 and 2 to the west, the closed Castor 5 range to the north, Chafee Road to the east, and the South Fort Polk cantonment area to the south. Munitions use on the range was limited to small arms blank ammunition and pyrotechnics. Dates of use are estimated to be from 1941 to 1966 based on available data.

CLEANUP STRATEGY

It is anticipated the following will be performed:

- OE Site characterization and Removal Assessment (151 acres)
- OE Removal Action (526 acres) and Institutional Controls

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: Low Risk

CONTAMINANTS OF CONCERN:
UXO

MEDIA OF CONCERN:
Soil, Groundwater

PHASES	Start	End
PA.....	200206	200305
RI/FS	201110	201209
RD	201510	201609
RAC	201610	201709

RC: 201709

POLK-003-R-01 MILL CREEK 1, 2, AND 3

SITE DESCRIPTION

This 783.1-acre closed military range encompasses the properties occupied by the current ASP. The range area is comprised of portions of the former Mill Creek 1, 2, and 3 Training Areas as depicted on the Fort Polk Military Installation Map, 1979. The area additionally encompasses the former numbered Training Area 5 and artillery firing points 708, 709, and 710 also depicted on the 1979 map. Munitions use on the range consisted of small arms blank ammunition and pyrotechnics. Portions of the range property also lie within former 155mm artillery range fans. The burning of unused propellant charges adjacent to the artillery firing points also occurred. The dates of use are estimated to be from 1941 to 1980 based on available data. No UXO responses are known to have occurred on the former range properties and the area is now occupied by the ASP.

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: Moderate Risk

CONTAMINANTS OF CONCERN:
UXO

MEDIA OF CONCERN: Soil,
Groundwater

PHASES	Start	End
PA	200206.....	200305
RI/FS	201110.....	201209
RD	201510.....	201609
RA(C)	201610.....	201709

RC: 201709

CLEANUP STRATEGY

It is anticipated the following will be performed:

- OE Site Characterization and Removal Assessment (79 acres)
- OE Removal Action (274 acres) and Institutional Controls

POLK-004-R-01

BLUE HOLE RECREATION AREA

SITE DESCRIPTION

This 276.72-acre transferred range is located on the southern boundary of the USFS IUA. This area formerly comprised the southern portion of the Big Creek 4 block training area as depicted on the Fort Polk Military Installation Map, 1979 and depicted as a bivouac and maneuver area on the Fort Polk Training Facilities Vicinity Map, 1967. The area was historically used as a fording swim site for tanks and a float bridge training site. Munitions used on the range include small arms blank ammunition, pyrotechnics, smokes, and obscurants. 155mm artillery firing points may also have been established within the area and coincidental burning of propellant charges may have occurred. Dates of use are estimated to be from 1941 to 1980 based on available data. No known UXO responses have occurred on the former range properties and the area is currently used for recreational purposes. **This site has been recommended for FUDS, FDE Task 1.**

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: Serious Risk

CONTAMINANTS OF CONCERN:
UXO

MEDIA OF CONCERN: Soil,
Groundwater

PHASES	Start	End
PA.....	200206	200305
SI.....	201509	201610
RI/FS	201611	201710
RD	201811	201910
RA(C)	202009	202210
LTM	202211	205209

RC: 202210

CLEANUP STRATEGY

This site has been recommended for FUDS, FDE Task 1.

POLK-005-R-01

LUA CYPRESS AND LONGLEAF

SITE DESCRIPTION

This 1,666.82-acre area lies within the USFS LUA bounded by the Rosepine, Johnsonville, Marlow, Flatwoods, and Providence Training Areas. The area was formerly used for military training in accordance with the conditions specified in the Special Use Permit Authorization (SUPA). The area encompasses both the Little Cypress Recreation Area and the Longleaf Scenic and Natural Area and is no longer used for military training. Munitions use in LUA Cypress and Longleaf was limited to small arms blank ammunition and pyrotechnics. The dates of use are estimated to be from 1941 to 1996 based on available data. No UXO responses are known to have occurred on the former range properties and the area is now primarily used for recreational purposes.

CLEANUP STRATEGY

It is anticipated the following will be performed:

- OE Site Characterization and removal assessment (152 acres)
- OE Removal Action (583 acres) and Institutional Controls

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: Low Risk

CONTAMINANTS OF CONCERN:
UXO

MEDIA OF CONCERN: Soil,
Groundwater

PHASES	Start	End
PA	200206	200305
RI/FS	201110	201209
RD	201510	201609
RA(C)	201610	201709

RC: 201709

POLK-007-R-01 NATIONAL CEMETERY

SITE DESCRIPTION

This 208.98-acre area lies west of Highway 467 along the north of Jeane Chapel Road along the western boundary of Fort Polk. This property was transferred to the Department of Veterans Affairs on 6 June 2002 to use as a National Cemetery. This property was included within the original boundaries of the installation and was contained within the bivouac and maneuver training areas. Munitions used on the range properties were limited to small arms blank ammunition and pyrotechnics. The dates of use are estimated to be from 1941 to 1996 based on available data. No UXO responses are known to have occurred on the former range property

CLEANUP STRATEGY

It is anticipated the following will be performed:

- OE Site Characterization and removal assessment
- OE Removal Action and Institutional Controls

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: Low Risk

CONTAMINANTS OF CONCERN:
UXO

MEDIA OF CONCERN: Soil,
Groundwater

PHASES	Start	End
PA.....	200206	200305
SI.....	200601	200712
RI/FS	201110	201209
RD	201510	201609
RA(C)	201610	201709

RC: 201709

POLK-009-R-01 FORMER ASP

SITE DESCRIPTION

The Former ASP is located northeast of the South Fort Polk cantonment area. The site is comprised of a 133.74 acre, chain-linked fenced enclosure located approximately 500 ft east of Texas Avenue and 100 ft south of Mill Creek Road. The site was operated as an ASP from the early 1940s to the late 1980s. In the late 1980s all the bunkers and the top 2 ft of soil were removed from each bunker site. The area has once been used as a vehicle staging area. One of the bunkers exploded in the 1950s, distributing small caliber ammunition in front of the damaged bunker. No record of an EOD clearance of the area could be located. Sampling in 1999 found metals in soil, surface water, and groundwater above state regulatory standards. Phase II Site Investigation (SI) samples indicated elevated levels of lead contamination in groundwater. The site is listed in AEDB-R as POLK-24. The CTC does not include UXO or DMM, but does include the removal of MC at the site. UXO hazard signs surround the entire site, and a tank round was reported to have been located during the 1999 sampling event.

Sampling in 1999 found metals in soil, surface water and groundwater above RECAP levels. Phase II SI samples indicated elevated levels of lead contamination in groundwater. Surface water was not impacted. A final risk assessment was released for comment in May 2002 with a recommendation of no further action. Closure of 14 GWM wells was completed in FY03.

CLEANUP STRATEGY

It is anticipated the following will be performed:

- Feasibility Study
- Install 5 GWM wells
- OE Site Characterization and removal assessment (17 acres)
- Remedial Investigation
- Site Inspection, groundwater monitoring
- Soil excavation (2427 cy)
- OE Removal Action (57 acres) and Institutional Controls
- OE Monitoring
- Off-site disposal of Hazardous Liquids (2420 gal)

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: Serious Risk

CONTAMINANTS OF CONCERN:
UXO

MEDIA OF CONCERN: Soil,
Groundwater

PHASES	Start	End
PA.....	200206	200305
SI	200601	200712
RI/FS	201110	201209
RD	201510	201609
RA(C)	201610	201709
LTM	201710	204709

RC: 201709

MMRP No Further Action Sites Summary

AEDB-R#	Site Title	Documentation/Reason for NFA	NFA Date
POLK-006-R-01	LUA COOTERS BOG	Operational range. Ineligible for MMRP	200305
POLK-008-R-01	NORTHWESTERN STATE UNIVERSITY	Part of FUDS program and ineligible for MMRP	200407

Initiation of MMRP: 2003

Past Phase Completion Milestones:

2003

PA - all sites, May

Projected ROD/DD Approval Dates: Unknown

Projected Construction Completion: 2022

Scheduled Five Year Reviews: Unknown

Estimated Completion Date of MMRP (including LTM): 2052

Fort Polk MMRP Schedule

(Based on current funding constraints)

AEDB-R#	PHASE	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
POLK-001-R-01	RI/FS									
	RD									201609
	RAC									201709
POLK-002-R-01	RI/FS									
	RD									201609
	RAC									201709
POLK-003-R-01	RI/FS									
	RD									201609
	RAC									201709
POLK-004-R-01	SI									201610
	RI/FS									201710
	RD									201910
	RAC									202210
	LTM									205209
POLK-005-R-01	RI/FS									
	RD									201609
	RAC									201709
POLK-007-R-01	RI/FS									
	RD									201609
	RAC									201709
POLK-009-R-01	RI/FS									
	RD									201609
	RAC									201709
	LTM									204709

Prior Years Funding

Year	Site Information	Expenditures	FY Total
FY02	PA - all sites	\$25K	\$25K
Total Funding (thru FY05): \$ 25K			

Current Year Funding

Year	Site Information	Expenditures	FY Total
FY06	SI - POLK-001-R-01	139K	
	SI - POLK-006-R 01	102K	
	SI - POLK-007-R-01	139K	
	SI - POLK-009-R-01	79K	\$459K
Total Funding FY06: \$459K			

Total Future Requirements: \$ 28,412K

Total MMRP Program Costs: \$28,896K

Community Involvement

Fort Polk does not currently have a Restoration Advisory Board (RAB) or a Technical Review Committee (TRC). Surveys were conducted in the summer 1996 and February 1998. There was not sufficient community interest to justify forming a RAB.